DOCUMENT RESUME

ED 382 775 CE 068 827

AUTHOR	Silverman, Gene; And Others
TITLE	Long Island Workplace Literacy Program. Final Performance Report and Final Evaluation Report.
INSTITUTION	Nassau County Board of Cooperative Educational Services, Westbury, N.Y.
SPONS AGENCY	Office of Vocational and Adult Education (ED), Washington, DC. National Workplace Literacy Program.
PUB DATE	Mar 95
CONTRACT	V19830198
NOTE	91p.
PUB TYPE	Reports - Descriptive (141) -- Reports - Evaluative/Feasibility (142) -- Tests/Evaluation Instruments (160)
EDRS PRICE	MF01/PC04 Plus Postage.
DESCRIPTORS	Adult Basic Education; *Adult Literacy; *Cooperative Programs; Employer Employee Relationship; Institutional Cooperation; *Literacy Education; Program Effectiveness; Program Implementation
IDENTIFIERS	*Workplace Literacy

ABSTRACT

The Long Island Workplace Literacy Partnership was established to provide workplace literacy programs for adult workers with inadequate reading, mathematics, communication, English language, and decision-making skills. Four corporations cooperated with the Board of Cooperative Educational Services of Nassau County in the project. The service delivery model was open ended and individualized, allowing for continuous enrollment, ongoing assessment, and ongoing placement. An individualized approach was used with students, instructional materials were workplace-specific, and instructors worked closely with students' supervisors to obtain input leading to program improvement. During the program, 294 adults were trained, curriculum was developed, products were disseminated, and the company partners demonstrated continuing commitment to the program. All project objectives were met except for provision of career counseling and other support services, which was deemed not feasible for the project. An outside evaluator noted the program's extensive successes. (Extensive appendixes to the project report include the following: a supervisor interview worksheet, a student interview form, a sample individual learning plan, forms for teacher and supervisor meetings, sample materials, staff training activities, a statewide conference presentation, job sheets, task sheets, checklists, and third-party evaluation.) (KC)

****
* Reproductions supplied by EDRS are the best that can be made *
* from the original document. *
****

ED 382 775

BOARD OF COOPERATIVE EDUCATIONAL SERVICES OF NASSAU COUNTY

Salisbury Center
Valentines Road & The Plain Road
Westbury, New York

LONG ISLAND WORKPLACE LITERACY PROGRAM

Final Performance Report

Award Number V19830198
June 1993 - November 1994

Prepared by:

Gene Silverman
Project Director

Sharon Douglas
Instructional Coordinator

Mary Mirabito
Project Evaluator

U.S. DEPARTMENT OF EDUCATION
Office of Educational Research and Improvement
EDUCATIONAL RESOURCES INFORMATION CENTER (ERIC)

☐ This document has been reproduced as received from the person or organization originating it.

☐ Minor changes have been made to improve reproduction quality.

• Points of view or opinions stated in this document do not necessarily represent official OERI position or policy.

Reviewed by:

Bonnie Mamsor, Ed.D.
Assistant Superintendent
Division of Occupational and Continuing Education

Philip Archer,
Executive Administrator
Office of Institutional Research and Evaluation

March 1995

CE 068 827

BEST COPY AVAILABLE

FINAL PERFORMANCE REPORT

LONG ISLAND WORKPLACE LITERACY PROGRAM
Award Number V19830198
June, 1993 - November, 1994

1. Accomplishments by Objective

All Objectives, Activities and Outcomes identified in the grant application on pages 15 and 16 of the original application have been met with the exception of Objectives 8 and 9, the provision of Career Counseling and other support services. These objectives were eliminated as activities not allowed in this program. It is important to note the successful training of 294 students; continued company commitment and involvement; successful training and instructional delivery by instructors; contextualized and customized curriculum and material development; and comprehensive dissemination of program models and strategies.

Appendix 1A, 1B, 1C, and 1D presents information about the curriculum development process. Appendix 2 presents sample information about meetings with the Business Partner Coordinating Council.

2. The schedule of accomplishments was followed as indicated in the timeline with one exception. Curriculum development was not completed during the first three months of program start up but was conducted as an ongoing process throughout the duration of the project.

3. The following are the outcomes for project participants completing the program:

English as a Second Language **239 participants**

ESL students completed planned activities that increased their level of English both by using standardized pre and post-tests as well as company reports from increased on-the-job performance. ESL classes contained curriculum that was delivered at the appropriate level and included both standard ESL materials and contextualized, worksite specific materials.

Basic Skills **59 participants**

Basic Skills of reading, writing, and mathematics were provided for English speaking employees in order to enhance literacies on the job. All classes were contextualized to the materials and artifacts of the company. Math that met very specific needs was instructed. In addition, Job and Literacy Task Analysis, student interviews, and Supervisor interviews were used to assess the areas in need of improvement by employees on the job.

Problem Solving/Communication/Decision Making 50 participants

These classes instructed employees in the areas of communication needed for them to be successful on the job. Company Supervisors and Managers gave direct input into program design. Classes included verbal and nonverbal communication, problem solving strategies, decision making models, and conflict resolution. These classes were extremely useful in companies with programs in Self Directed Teams and Total Quality Management where employees were required to have new skills in order to fulfill their job responsibilities. Although formal curriculum was available in this area, much of the program was developed by instructors to meet very specific needs and to be flexible as new issues arose.

During the course of this project, there was only one class of students that did not successfully meet program outcomes. At one company, Ademco, an ESL class was developed to try to serve severely undereducated and limited employees. These students lack education even in their own language, as well as motivation to participate. (The company is unionized and these employees were senior members.) We developed and held class for these students for eight months. Progress was very slow. For some students, simply holding a pencil and coming to class ready to work was a significant accomplishment. Due to the very slow progress of this class and lack of impact at the worksite, the class was terminated. The company and BOCES agreed that the resources of this grant and the company investment in time and energy would be better spent in areas that would positively impact the company and benefit employees.

All instructors received staff development and training. Initially, there was a two-day training presented on Long Island by the National Center for Family Literacy from Louisville, Kentucky by Ms. Nancy Spradling. In addition, there were three targeted staff development programs and a statewide conference that instructors attended. Every Friday, the Instructional Coordinator was available for individual training or technical assistance for instructors, and often times a structured presentation was offered on a specific area of workplace literacy. Instructors regularly came on Fridays for this assistance, as well as to develop curriculum or materials with their colleagues. Tables 1 and 2 present data regarding selected training activities.

Table 1

Workshop Evaluation - 11/29/94

Rating\ Parameter (n=18)	Excellent (5)	Very Good (4)	Good (3)	Fair (2)	Poor (1)	N/R	Mean
Facilities	7	4	6	1	0	0	3.9
Organization/Format	6	9	3	0	0	0	4.2
Relevance of Information	12	2	3	1	0	0	4.4
Usefulness of Training Materials	7	7	3	0	0	1	4.2
Overall Quality of this Workshop	8	8	1	0	0	1	4.4

Table 2

Workshop Literacy - 1/19/95

Rating\ Parameter (n=21)	Excellent (5)	Very Good (4)	Good (3)	Fair (2)	Poor (1)	N/R	Mean
Overall rating of the days activities	10	8	3	0	0	0	4.3
Rating of program content	9	10	2	0	0	0	4.3
Program structure (balance of large group, small group individual participation)	8	2	6	1	1	3	3.8

Please see Appendix 3 for sample agendas.

4. Dissemination Activities:

- Three inservice programs for Long Island Workplace Literacy instructors from September 1993 to June 1994.
- Presentation at statewide conference: Association of Vocational Education Administrators on this Workplace Literacy program and models
- Meeting in Washington,D.C. with AFL-CIO Education Director Anthony Sarmiento and Toby Emer, Regional UAW/AFL-CIO Coordinator
- Sponsored statewide Workplace Literacy Conference, "High Performance Workplace Literacy" held at the Long Island Marriott, one of our business partners
- Meetings with area businesses to promote and inform about workplace literacy

BEST COPY AVAILABLE

- Attendance at program closeout conference in Washington, D.C.

- Submission of Final Performance Report and Final External Evaluation Report to the ERIC Clearinghouse on Adult, Career, and Vocational Education Center on Education and Training For Employment

Please see Appendix 4 for Presentation at Statewide Conference.

5. Evaluation Activities
   - Staff Training
   - Pre and Post-Test Students
   - Student Portfolios and "Report Cards" (Progress reports)
   - Supervisor Survey for On-The-Job Performance Improvement
   - Interviews with Managers of Partner Companies
   - Student Surveys
   - Instructor and Coordinator Interviews
   - Conference and Training Evaluations
   - Curriculum Material Review

Please see Appendix 5A, 5B, and 5C for information regarding program evaluation.

6. Changes in key personnel:
   The Project Director was increased to a .5FTE; Ms. Sharon Douglas replaced Mrs. Nora Chomicz as the Instructional Coordinator and was increased to a 1.0 FTE.

BEST COPY AVAILABLE

NATIONAL WORKPLACE LITERACY PROGRAM
INFORMATION FORM

Part 1: Program Parameters

1. Target No. to be Served: 250

2. No. Served at Each Site to Date:

SID Site 1	48
Adesco Site 2	182
GI Site 3	15
Marriott Site 4	25

3. Total No. Served: 270

4. Fed. Funds Obligated: 318,687

5. Matching Funds/In-kind: 458,249

6. Value Release Time: 112,240

7. No. Participating in Program Offered:

Basic Skills	62
GED	
ESL	208

8. Contact Hours Provided: 16,528

(Contact Hours are the number of teaching hours that workers receive)

Part 2: Participation Data

1. Mean Age Participants: 40

2. Sex: No. Males 100 No. Females 170

3. Race/Ethnicity: No. who are:

White	56
Black	36
Hispanic	150
Am. Indian/ Alaska Native	
Asian/Pacific Islander	28

4. No. Single Head of Household: 126

5. No. Limited English Proficient: 198

6.

Outcome	No. Participants
a. Tested higher on basic skills	
b. Improved communication skills	
c. Increased Productivity	
d. Improved attendance at work	
e. Increased self-esteem	

7.

Years with the company	No. Participants
Unemployed	0
0-5	136
6-10	82
11-15	29
16-over	23

BEST COPY AVAILABLE

APPENDIX 1A

SUPERVISOR INTERVIEW WORKSHEET

APPENDIX 7

SUPERVISOR INTERVIEW WORKSHEET

Organization: _____

Department: _____

Supervisor or Code: _____

WESA Analyst: _____

Date: _____

INTRODUCTORY STATEMENT

(NOTE: Analysts should record frequently used job or workplace-specific terms or jargon in item #12 of this worksheet.)

MANPOWER RELATED TO BASIC SKILLS

1. As you review the job duties summary, is it consistent with the job? Does this position perform other job duties?

2. What duties do you believe are the most critical to the job? Which are performed the most frequently?

3. What basic skills do you assume this position requires in the area of computing? Writing? Listening? Problem-solving? Reading? Speaking? Working in teams?

(PROBE: Why is the assumption made?)

APPENDIX 7

SUPERVISOR INTERVIEW WORKSHEET
PAGE 2

4. How do you orient employees to their jobs? Do you use different methods or approaches for different jobs or situations?

5. Under what circumstances would you have to change your method of orientation or training?

6. When working with new employees in positions (list jobs being analyzed), what is the nature and frequency of any difficulties observed in the following areas?

safety:	teamwork:	prioritizing:
planning:	quality:	cross-training:
training:	instruction:	other:

(PROBE: Are the difficulties associated with basic skills? If so, how?)

7. When working with more experienced employees in positions (list jobs being analyzed), what is the nature and frequency of any difficulties observed in the following areas?

safety:	teamwork:	prioritizing:
planning:	quality:	cross-training:
training:	instruction:	other:

BEST COPY AVAILABLE

(PROBE: Are the difficulties associated with basic skills? If so, how? NOTE: If difficulties are being observed, try to learn of the ongoing training available to employees on-the-job.)

METHODS RELATED TO BASIC SKILLS

8. What basic skills are needed to:

   a. Work independently or with minimal supervision? Work in a team or group? Work in a cell?

   b. Work within guidelines, rules or tolerances? Work without structure or supervision?

      (PROBE: How is work prioritized?)

   c. Measure and record quality methods (e.g., SPC, J-I-T, inspection, etc.)?

   d. Work with other departments?

   e. Adapt to change (e.g., schedules, machinery, etc.)?

APPENDIX 7

SUPERVISORY INTERVIEW WORKSHEET
PAGE 4

MATERIALS RELATED TO BASIC SKILLS

9. Are difficulties in basic skills experienced when:

   a. Using manuals to learn operating procedures, troubleshooting problems, learning new methods, etc.?

      (PROBE: How often are manuals used and what type of information is being sought?)

   b. Completing company forms (e.g., job tickets, time sheets, expense sheets, etc.)?

   c. Completing personnel documents such as insurance forms, worker's compensation statements, postings for new jobs, union contracts, etc.?

   d. Interpreting data and completing logs, charts, graphs, or tables?

   e. Reading labels, signs, tags and other documentation that provide warnings or information on contents, etc.?

BEST COPY AVAILABLE

f. Keeping abreast of current issues, new methods and machinery through bulletin boards, newsletters, newspapers, trade magazines, journals, etc.?

MACHINERY RELATED TO BASIC SKILLS

10. Are difficulties in basic skills experienced when:

a. Using automated equipment or machinery, such as: digital meters or clocks, fax machines, computer controllers, PCs, copy machines, etc.?

(PROBE: What kinds of preparation and training were provided prior to the introduction of the equipment?)

b. Using manual equipment, machinery or tools, such as: rules, micrometers, typewriters, press brakes, etc.?

(PROBE: Are the difficulties seen most frequently due to routine or uncommon situations?)

c. Changing from using manual to automated equipment or machinery? Or changing from automated to manual equipment (e.g., not using the automated cash register, but making change)? Or transferring skills from one type/model of equipment or machinery to another?

BEST COPY AVAILABLE

APPENDIX 7

SUPERVISORY INTERVIEW WORKSHEET
PAGE 6

(PROBE: How are difficulties manifested during changeovers or breakdowns of equipment or machinery?)

d. Using computers, CRTs and related peripheral equipment (e.g., printer, modem, wand, scanner, etc.)?

11. Are sensory skills needed to detect odors, noises, or color changes in machinery, equipment, products produced or processes used?

(PROBE: How is this information communicated?)

OTHER

12. Do I understand the meaning of the following terms/jargon? (List job or workplace-specific terms/jargon below with their definitions.)

13. Do you have any other comments?

BEST COPY AVAILABLE

APPENDIX 1 B

STUDENT INTERVIEW FORM

NASSAU BOCES
WORKPLACE LITERACY PARTNERSHIP

ADEMCO
1993/94

NAME		DATE	
JOB TITLE		EMPLOYEE #	
SUPERVISOR		LOCATION	

A. READING:

		YES	NO
1.	Do you read as part of your job?	___	___
2.	Do you read... Applications?	___	___
	Catalogues?	___	___
	Charts?	___	___
	Employee Newsletters?	___	___
	Graphs?	___	___
	Job Handbooks?	___	___
	Magazines?	___	___
	Manuals?	___	___
	Posters?	___	___
	Product Update Reports?	___	___
	Safety Labels/ Warnings?	___	___
	Signs?	___	___
	Technical Manuals?	___	___
	Time Sheets?	___	___
	Training Materials?	___	___
	Other? (Please list.)		
	_____		
	_____		
3.	Do you need to read *all* of the above as part of your job?	___	___

4. If not, which ***must*** you read as part of your job?

_____

_____

5. Which reading items are ***optional***?

_____

_____

6. Which on-the-job reading skills do you find...

The easiest? _____

_____

_____

Most pleasurable? _____

_____

_____

Most difficult? _____

_____

_____

B. MATH:

		YES	NO
1.	Do you do math as part of your job?	___	___
2.	Do you... Identify numbers?	___	___
	Write numbers?	___	___
	Add and subtract?	___	___
	Multiply and divide?	___	___
	Use decimals, fractions, percentages?	___	___
	Use measurements (English & Metric)?	___	___
	Interpret charts, graphs, & statistics?	___	___
	Use a calculator?	___	___
	Use a computer?	___	___
3.	**Do you need to do *all* of the above math as part of your job?**	___	___

4. **If not, what math *must* you do as part of your job?**

_____

_____

5. What math skills are ***optional***?

_____

_____

6. What job-related math skills do you find the easiest?

_____

_____

7. What job-related math skills are you having difficulty with?

_____

_____

C. **WRITING:**

		YES	NO
1.	Do you write as part of your job?	___	___
2.	Do you... Print?	___	___
	Use script?	___	___
	Complete applications, forms, orders, lists?	___	___
	Write instructions, notes, questions?	___	___
3.	Do you need to write ***all*** of the above as part of your job?	___	___

4. If not, which ***must*** you write as part of your job?

_____

_____

5. Which writing skills are ***optional***?

_____

_____

6.	Do you need improvement on: Sentences?	___	___
	Punctuation?	___	___
	Capitalization?	___	___
	Spelling?	___	___

APPENDIX 1C

INDIVIDUAL LEARNING PLAN

ADEMCO

INDIVIDUAL LEARNING PLAN

Date_____
Name_____
Present Job Title_____
Department_____
Work Hours_____

GOALS AND OBJECTIVES

LITERACY
Short Term_____
Long Term_____

JOB PERFORMANCE
Short Term_____
Long Term_____

MATERIALS TO BE USED

TRADITIONAL:
1._____ 4._____
2._____ 5._____
3._____ 6._____

ON-THE-JOB:
1._____ 4._____
2._____ 5._____
3._____ 6._____

EVALUATION METHOD:

NYS Placement Test:_____ Retest:_____
BEST TEST:_____ Retest:_____
TABE:_____ Retest:_____

ON-THE-JOB-MATERIAL EVALUATION
1._____
2._____
3._____

BEST COPY AVAILABLE

Comments Made by Either the Participant or the Supervisor:

BARRIERS TO COMPLETION OF GOALS AND OBJECTIVES

SOLUTIONS TO BARRIERS

APPENDIX 1D

TEACHER/SUPERVISOR CURRICULUM MEETINGS: ADEMCO

TEACHER/SUPERVISOR CURRICULUM MEETINGS: ADEMCO

DATE OF MEETING:	
SUPERVISOR OR MANAGER:	
INSTRUCTOR:	
DEPARTMENT:	
CLASS/TIME:	

1. **Topics to be covered over the next week/month:**

2. **English skills &/or vocabulary words to be emphasized during the next week/month:**

3. **Job tasks and literacies to be covered in the next week/month:**

4. **Materials gathered from the worksite that will be used in contextualized instruction:**

5. **Barriers and possible solutions to problems encountered :**

DATE INSTRUCTION COMPLETED: **INITIALS OF INSTRUCTOR:**

APPENDIX 2

SAMPLE MATERIALS:

BUSINESS PARTNERS COORDINATING COUNCIL

NASSAU BOCES

National Workplace Literacy Program
June 1, 1993 - November 30, 1993

Long Island Workplace Literacy Partnership

Coordinating Council: First Meeting
June 21, 1993
Nassau BOCES, Salisbury Center

AGENDA

Welcome and Introductions

Background:	Workplace Literacy National Workplace Literacy Funds and Legislation Local initiations to date	
Program Goals:	Individual Grouping Objectives Grant Objectives	
Administration:	Budget Staff	
On Site Program:	Contact people/liaison involved with curriculum and instruction	
Program Development:	Site based needs:	employees curricula supervisors/managers
	Process of development Instruction On-going Evaluation, Assessment, and Feedback Employee/company buy in and PR (site based "committees?")	

Time Line

Discussion

"We need to meaningfully involve both education and corporate partners--hold both accountable and empower both, set meaningful and attainable goals, and help them expand their definition/perception of literacy." - Project Director, Sept. 1991 Conference

Serving
56
Local
School Districts

BOARD OF COOPERATIVE EDUCATIONAL SERVICES
OF NASSAU COUNTY

DIVISION OF OCCUPATIONAL AND CONTINUING EDUCATION

June 11, 1993

Mr. Gary Barello
Training Manager
General Instrument
600 West John Street
Hicksville, NY 11802-1602

Dear Mr. Barello:

It is with great pleasure that I am writing to confirm the first meeting of business of Nassau BOCES partners for the National Workplace Literacy Program. That meeting is to be held on Monday, June 21, 1993, from 9:00 to 11:00 a.m. at the Nassau BOCES, Salisbury Center on Valentines and The Plain Road, Westbury (map enclosed), in Conference Room B.

Receipt of this grant is both an honor and a challenge. The federal legislation authorizing the grant is intended to improve the basic skills, and thus the productivity, of the workforce by the creation and maintenance of school, business, labor, and private industry council partnerships. Current research and practice states that learning these basic skills in the context of the work environment greatly increases learning and direct application to real world operations. The funds received give us the resources to develop and deliver worksite programs for employees that will increase their literacy, numeracy, communication and/or English as a Second Language skills.

On Monday, we will address the following elements of the project:

- The framework and requirements of the grant and the applications of resources
- Some background material and concepts of workplace literacy
- The three "levels" of the program--
  - ~ administration
  - ~ school/business partnership mana_ nent and function
  - ~ direct service: delivery of instruction and evaluation
- first steps for individual company planning
- time line

Salisbury Center • Valentines Road and The Plain Road, P.O. Box 1034, Westbury, New York 11590-0114 • 516 997-8700

Enclosed is some material for your review about Workplace Literacy. WORKPLACE EDUCATION: VOICES FROM THE FIELD is a wonderful guidebook for our project. Hopefully, you will have a chance to review it before our meeting.

I look forward to our meeting and this year of working together as partners in education.

Sincerely,

Bonnie Marmor

Bonnie C. Marmor, Ed. D.
Assistant Superintendent

BCM:ns
Attachments

BEST COPY AVAILABLE

WORKPLACE LITERACY

June 21, 1993

MINUTES

1. Participants: Bonnie Marmor, Alan Doyle, Gene Silverman - *Nassau BOCES*; Katherine Engel, Bob Crissara, *ADEMCO*; Gary Barello, *Gen. Instrument*; Lisa Privett-Wood, *Long Island Marriott*; Barbara Schwartz, *SID Tools/MSC Ind. Supply Co.*

2. Define "Literacy" as numeracy, communication skills or writing and not computer training, promotional programs or on the job skills training.

3. Noted that supervisors, except supervisors one step above participants, are not eligible for services. Supervisors however can audit programs on a seats available basis or participate in the development of curricula to encourage buy-in.

4. Project was requested to include on-site assessment of needs. Review of budget and procedures will be done with a response by early July.

5. Noted that "Work in America" is doing things similar to ourselves and that contact and sharing should take place.

6. Discussed three separate functions for outside consultants, including:

   - needs assessment at company site
   - curriculum development
   - evaluation

   Participants requested that evaluator be present from the beginning to insure appropriate data is available.

7. Reviewed project goals and notified participants that #8, and first two activities under #9 were cancelled.

8. Discussed need to identify minimum number of students for small classes, need to motivate workers to use skills learned outside the class, involving spouses, and use of tapes or videos and integrated classrooms.

9. Identified need for kick-off event at each site before training begins.

10. Results of intervention should improve worker participation in company as well as productivity.

WORKPLACE LITERACY

PARTICIPANTS	*INSTITUTION/COMPANY*	*TEL. & FAX #*
Bonnie Marmor, Asst. Superintendent	*Nassau BOCES - Salisbury* P.O. Box 1034 Westbury, NY 11590-0114	Tel. (516) 997-8700 Fax (516) 333-8135
Alan Doyle, Supervisor - Occup. Ed.	*Nassau BOCES - Salisbury* P.O. Box 1034 Westbury, NY 11590-0114	Tel. (516) 997-8700 Fax (516) 333-8135
Gene Silverman, Project Officer	*Nassau BOCES - Westbury* 1196 Prospect Avenue, Westbury, NY 11590	Tel. (516) 997-5410 Fax (516) 333-9384
Katherine Engel, VP - Human Resources	*ADEMCO* 165 Eileen Way Syosset, NY 11791	Tel. (516) 921-6704 (5090) Fax (516) 364-0746
Robert P. Crissara, Director - Ind. Relations	*ADEMCO* 165 Eileen Way Syosset, NY 11791	Tel. (516) 921-6704 (2230) Fax (516) 364-0746/ 364-5344
Gary Barello, Manager - Training	*General Instrument* 600 West John Street Hicksville, NY 11802-1602	Tel. (516) 933-3704 Fax (516) 933-3060
Lisa Privett-Wood, Director - Human Resources	*Marriott Corp. - L. I.* 101 James Doolittle Blvd. Uniondale, NY 11553	Tel. (516) 794-3800 Fax (516) 794-8530
Barbara Schwartz, VP - Human Resources	*SID Tools/MSC Ind. Supply* 151 Sunnyview Blvd., Plainview, NY 11803	Tel. (516) 349-7100 (1224) Fax (516) 349-7653

APPENDIX 3

SELECTED INFORMATION:

STAFF TRAINING ACTIVITIES

HIGH PERFORMANCE WORKPLACE LITERACY

AGENDA

8:30 AM - 9:00 AM REGISTRATION/COFFEE

9:00 AM - 9:55 AM OPENING REMARKS: *Gene Silverman, Nassau BOCES*

SALONS A - C

GREETINGS: *Bonnie C. Marmor, Assistant Superintendent, Nassau BOCES*

WORKPLACE LITERACY OVERVIEW: *Gene Silverman*

STATE EDUCATION DEPARTMENT PERSPECTIVE: *Robert Knower, Coordinator for Workforce Preparation*

BUSINESS PERSPECTIVE: *Katherine Engel, Vice President, ADEMCO*

10:00 AM - 12:00 PM CONDUCTING ORGANIZATIONAL ASSESSMENTS

SALONS A - C

Mary Gershwin
Catherine Hatfield

12:00PM - 1:00 PM LUNCH/NETWORKING

SALON D

1:10 PM - 2:30 PM CONCURRENT WORKSHOPS

EISENHOWER	**WORKSHOP A:**	**LINKING BASIC SKILLS TO TECHNICAL TRAINING AND JOB TASKS** -- *Catherine Hatfield*
LINDBERG	**WORKSHOP B:**	**BUILDING FOR THE TRANSFER OF TRAINING** -- *Mary Gershwin*

2:30 PM - 3:15 PM Wrap-Up/Evaluation
(In Workshop Room)

PRESENTERS:

Mary Crabbe Gershwin

Mary Crabbe Gershwin directs the Colorado Community College and Occupational Education System's "skills for a Competitive Workforce Program," a federally funded national workplace literacy program which serves over 1000 participants in fourteen companies throughout the state of Colorado. Ms. Gershwin has served as a consultant and trainer for organizations such as Bell Labs, Motorola, Sprint, The University of Denver, The Minnesota Technical College System, and The University of Northern Illinois. She holds a Masters Degree in Applied Communication and is a Ph.D. graduate fellow in Communications at the University of Denver. She has published several articles addressing the training needs of the emerging workforce.

Catherine Hatfield

Catherine Hatfield is the Manager of Headquarters Education for Storage Technology in Louisville, CO. In this capacity she oversees basic skills instruction, ESL instruction, manufacturing education, engineering education, computer training, and computer application training for a workforce of 6000. Ms. Hatfield developed Storage Technology's in-house basic skills education program which serves 300 employees annually and has received numerous awards. Prior to her employment at Storage Technology, Ms. Hatfield directed the Adult Learning Source--the largest volunteer group in the Rocky Mount region. She is president of the Colorado Association for Continuing and Adult Education and she holds a Masters Degree in Curriculum and Instruction from the University of Denver.

BOARD OF COOPERATIVE EDUCATIONAL SERVICES

OF NASSAU COUNTY

INTEROFFICE MEMO

TO: Workplace Literacy Educators (See Distribution)

FROM: Gene Silverman

DATE: February 23, 1994

RE: Staff Development Workshop

= = = =

EDUCATION FOR THE WORKPLACE

STAFF DEVELOPMENT WORKSHOP I*

PRESENTED BY: BOCES III, NASSAU BOCES
AND THE LONG ISLAND STAFF DEVELOPMENT
CONSORTIA

AN
OVERVIEW OF
WORKPLACE LITERACY

" DESIGNING A SUCCESSFUL PROGRAM "

WEDNESDAY, JANUARY 19th, 1994
3:30 to 6:30 pm

GUEST SPEAKERS:

Robert Knower - NYS Dept. of Education
Gary Barello - General Instument

AT:
BOCES III (LARGE CONFERENCE ROOM)
17 WESTMINSTER AVE
DIX HILLS, NY 11746
(516) 667-6000 Ext. 396

BEST COPY AVAILABLE

*** THE FIRST OF A 3 PART TRAINING SESSION.**
WORKSHOPS 2 & 3 WILL BE TARGETED FOR TEACHERS.

APPENDIX 4

STATEWIDE CONFERENCE PRESENTATION:

"BEHIND THE SCENES - CREATING A HIGH PERFORMANCE CLASSROOM TO PREPARE LEARNERS FOR THE HIGH PERFORMANCE WORKPLACE"

NASSAU BOCES

AVEA SPRING CONFERENCE
CAROUSEL

PRESENTED BY: SHARON DOUGLAS - NASSAU BOCES

"BEHIND THE SCENES - CREATING A HIGH PERFORMANCE CLASSROOM TO PREPARE LEARNERS FOR THE HIGH PERFORMANCE WORKPLACE"

A Workplace Literacy system must be put into place before a formalized program of instruction begins. It starts with the dedication of funds such as from the Federal Government for a National Workplace Literacy Grant. Companies are asked to be partners that may or may not formalize the program to be put into place before the grant or funding is approved by Washington. With the acquisition of funding, the companies are contacted and the formal system of operations and management is put into place. A six month start up is recommended. (This was the time allowed within the guidelines of the Federal grant. It is a realistic time period.)

I. **MANAGEMENT:**

- Advisory Board-Identify key people, meet quarterly, learn about partner organizations behavior and culture
- Monthly Meetings- managers and supervisors, Human Resource people
- Coordinate classes/times - location of classrooms, propose schedules with supervisor/managers feedback
- Commitment of 50% release time - pay employees
- Union - involved in meeting to develop positive relationship

II. SUPERVISORS/MANAGERS:

- Orientation Meeting - involvement in classroom and commitment to program
- Forms for needs assessment
- Prioritize performance and literacy needs
- Focus groups

III. STAFF DEVELOPMENT:

- Hiring teachers- attitudes and skills inventory assessment
- Interviews and references based on skills related to workplace
- Manuals developed containing:
  - Research materials
  - Instructional techniques
  - Forms
  - Lessons plans for guidelines and development
- Guidelines for Job Task Analysis, Supervisor Interview, Performance Observation and Literacy Task Analysis
- Real job applications from company - artifacts
- Staff Development - (ie: The National Center for Family Literacy; Long Island Consortium, etc.)

IV. CURRICULUM:

- Company Needs Assessment
  - Through observation
  - Documents
- Job Task Analysis
  - Interview Human Resource personnel
  - Interview Supervisors
  - Observe performance tasks
- Prescribed a Literacy Task Analysis
  - Based on Job Task Analysis
- Created Functional Context Based Curriculum
  - Research to find existing curriculum through ERIC or Vocational Ed.

V. LESSON PLAN/INSTRUCTION - HIGH PERFORMANCE CLASSROOM:

SKILLS AND KNOWLEDGE ARE BEST LEARNED IF THEY ARE PRESENTED IN A CONTEXT THAT HAS MEANING TO LEARNER AND WHEN INSTRUCTIONAL MATERIALS ARE RELEVANT TO WORK AND PERSONAL GOALS.

- Lesson Plans designed and developed
  - Based on Job Task Analysis
  - Supervisor interviews
  - Real applications and forms from company
  - Collect artifacts from company (ie: what workers use at their job station)
  - Literacy Based
  - Observation of workplace
  - Problem solving techniques
  - Evaluation and assessment of lesson objectives
- Instruction Should Be Created
  - To visualize the whole work process
  - Think critically
  - Recognize cause and effect
  - Solve problems
  - Work in teams
  - Integrate basic skills in a context so that learners use their skills and knowledge to solve problems in real work contexts
  - Require learner to perform a cluster of skills to find solutions
  - Worker centered

- Scope of skills and knowledge accessed
  - Using forms and documents
  - Obtaining information and using resources
  - Workplace competencies
  - Improving Workplace Performance Based On:
    - Reading and writing
    - Math
    - Interpersonal skills
    - Oral communication
    - Systems and technology

VI. TEACHERS:

- Traditional vs workplace classrooms
- Open communication between companies, students, supervisors/ manager focus groups
- Problems in class - key people to contact in company and BOCES

VII. STUDENT RECRUITMENT:

- Voluntary vs Mandatory
- Company needs assessment
  - Voice Mail/E-Mail
  - Memo
  - Employee Reviews
  - Attendance - promptness
  - Supervisors/Managers Support to obtain artifacts and reinforce lessons on the job

VIII. ASSESSMENT:

- Standardized Tests
- Criterion Reference Tests
- Self-esteem
- Self-efficacy
- Portfolio
- Benchmarks

IX. PROBLEMS AND COMPLAINTS:

- Supervisors involvement can be too much in the classroom
- Time schedules (often changed and manipulated based on company needs)
- Managers misconceptions and miscommunications
- Teachers absences-procedures used and school holidays
- Complaints must be acted on immediately
- Teacher replacement - procedure- contact key people at company, hold focus groups with management and workers; use of substitutes

NASSAU BOCES - WORKPLACE LITERACY PROGRAM

INSTRUCTIONAL DELIVERY MODEL

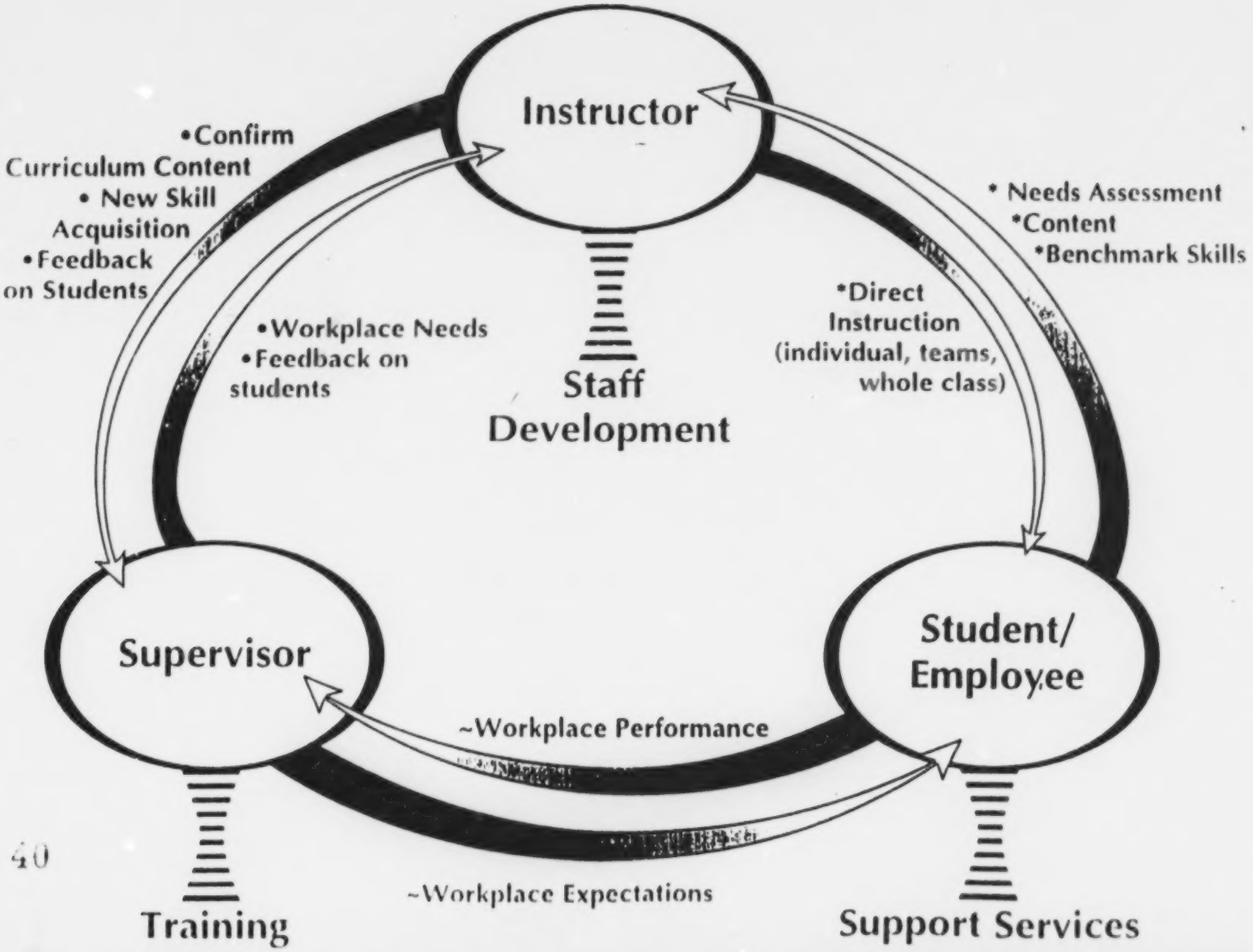


FIGURE 3

APPENDIX 5A

TRAINING SESSION ON EVALUATION

WORKFORCE EDUCATION

TRAINING SESSION ON EVALUATION

PRESENTED BY: Mary Mirabito- Evaluator
Sharon Douglas and Gene Silverman

OVERVIEW OF WORKPLACE LITERACY EVALUATION

TEACHER GENERATED ASSESSMENT

INTERIM AND END OF THE YEAR ASSISSMENT

GUIDELINES FOR SHARING STUDENT ASSESSMENTS WITH COMPANIES

APPENDIX 5B

SUPERVISOR JOB TASK PERFORMANCE INVENTORY

FEDERAL WORKPLACE LITERACY PROGRAM EVALUATION
Supervisor Job Task Performance Inventory
December 1994

Employee's Name _____

Job Title: _____

Reports to: _____

Please indicate the worker's ability to perform the work related activities as a result of his/her involvement in the Workplace Literacy Program. Please use the following scale from 5 (Excellent) to 1 (Poor).

	Assessment Level				
EXPECTED OUTCOMES OF THE WORKPLACE LITERACY PROGRAM	Excellent	Very good	Good	Fair	Poor
Increased productivity.	5	4	3	2	1
Improved job performance.	5	4	3	2	1
Improved understanding of safety rules and procedures.	5	4	3	2	1
Enhanced ability of employees to meet changes in the work environment.	5	4	3	2	1
Improved communication and interpersonal skills on all levels.	5	4	3	2	1
Improved job attitude and morale.	5	4	3	2	1
Improved understanding and performance in team work resolution.	5	4	3	2	1
Improved ability to complete forms and personal data sheets.	5	4	3	2	1
Less confusion regarding work assignments.	5	4	3	2	1
Improved attendance.	5	4	3	2	1

Please return in the enclosed envelope to:

Mary Mirabito,
Research and Evaluation Consultant
Nassau BOCES
Office of Institutional Research & Evaluation
Valentines Rd. & The Plain Rd.
Westbury, NY 11590

APPENDIX 5C

CHECKLIST OF STUDENT ACCOMPLISHMENTS

Nassau BOCES Workplace Literacy Partnership

CHECKLIST OF STUDENT ACCOMPLISHMENTS

JOB TASKS

	ADEMCO _____ _____	Interpersonal Skills	Safety Rules/ Procedures	Attendance & Punctuality	Personal Data	Productivity	Team Work	Knowledge of Company/Product	Procedures/ Instructions					Method of Assessment
	Intoductions/Greetings													
	Times/calendar													
	Read & Understand Rules													
	Recognize Vocabulary													
S	Respond to Questions													
K	Respond to Illness/Emergencies													
I	Respond to Safety Hazards/Emergencies													
L	Complete Accident Report Form													
L	Write Notes													
S	Understand Accident Prevention													
	Understand Company Policy/Procedures													
	Indentify Parts of the Body/Illness													
	Relate Personal Data													
	Identify Numbers/Alphabet													

METHODS OF ASSESSMENT

O - OBSERVATION
W- WRITTEN COMPETENCY/HOMEWORK
V- VERBAL RESPONSE

Nassau BOCES Workplace Literacy Partnership

CHECKLIST OF STUDENT ACCOMPLISHMENTS

JOB TASKS

ADEMCO _____ _____	Interpersonal Skills	Safety Rules/ Procedures	Attendance & Punctuality	Personal Data	Productivity	Team Work	Knowledge of Company/Product	Procedures/ Instructions					
Recognize & Understand Abbreviations													
Squence Events													
Recognize & Undertand Cause and Effect													
Develop Pride and Self-Esteem													
Read Maps/Charts													

SKILLS

METHODS OF ASSESSMENT

O - OBSERVATION
W- WRITTEN COMPETENCY/HOMEWORK
V- VERBAL RESPONSE

1993/94

Nassau BOCES Workplace Literacy Partnership

CHECKLIST OF STUDENT ACCOMPLISHMENTS

ADEMCO _____ _____	EXCELLENT	GOOD	NEEDS IMPROVEMENT	COMMENTS
PUNCTUALITY				
ATTITUDE				
STUDY SKILLS				
MEETS CLASS ASSIGNMENTS				
WORKS WELL IN TEAMS				
CLASS PARTICIPATION				

ATTENDENCE

# OF DAYS ATTENDED	
# OF HOURS ATTENDED	

GENE SILVERMAN

FINAL EVALUATION REPORT

Long Island Workplace Literacy Project

Education Partner:
Board of Cooperative Educational Services of Nassau County

Industry Partners:
ADEMCO CORPORATION
GENERAL INSTRUMENT
MARRIOTT CORPORATION
SID/MSC TOOL CORPORATION

Funded by:
United States Department of Education
National Workplace Literacy Program

Project # V198A30198

Grant Period: June 1, 1993 through November 30, 1994

Submitted to:
Gene Silverman, Project Director
Board of Cooperative Educational Services of Nassau County

Submitted by:
Consulting For The Human Services
Mary Mirabito, Evaluation Consultant

Reviewed by:
Philip Archer, Executive Administrator
Office of Instructional Research and Evaluation

Bonnie Marmor, Ed.D.
Assistant Superintendent
Division of Occupational and Continuing Education

March 1995

TABLE OF CONTENTS

I. Overview and Project Objectives 1

II. Purpose and Scope of the Evaluation 4

III. Program Implementation

Profiles of the Business Partners 7
Curriculum Development 9
Assessment 9
Recruitment 10
Staff Development 10
Instruction 11
Dissemination 11
Management and Administration 11

IV. Findings

Impact on Students 21
The Teachers' Perspective 30
The Employers' Perspective 34

V. Conclusions and Recommendations

List of Figures

Figure 1: Project Objectives, Activities, and Outcomes 3
Figure 2: Key Evaluation Questions for the LIWLP 5
Figure 3: Workplace Literacy Evaluation: Type of Data Collected 6

List of Tables

Table 1: Business Partners Profile 8
Table 2: Student Enrollment and Class Distribution 13
Table 3: Gender and Single Head of Household Status by Worksite 14
Table 4: Mean Age of Participants Across All Sites 14
Table 5: Ethnic Distribution and LEP Status of Participants 15
Table 6: Number of Years with the Company Across Sites and by Site 16
Table 7: Occupations Represented Across All Work Sites 17
Table 8: Distribution of Occupations: Ademco 18
Table 9: Distribution of Occupations: General Instrument 19
Table 10: Distribution of Occupations: Marriott 20
Table 11: Distribution of Occupations: SID/MSC Tool 20
Table 12: Total Contact Hours of Instruction Across All Worksites 21
Table 13: Duration, Frequency and Conact Hours by Class by Worksite 22
Table 14: Student Outcomes by Worksite and Class 27
Table 15: Teacher's Ratings of Participants' Ability to Link Training to Worksite 31
Table 16: Teacher's Rating of Business Partner Strategies: Linking Training Back to the Worksite 32
Table 17: Supervisor Ratings of Job Task performance as a Result of Participation in LIWLP 35

I. OVERVIEW AND PROJECT OBJECTIVES

Introduction

The Long Island Workplace Literacy Partnership (LIWLP) was established as a partnership between the Board of Cooperative Educational Services of Nassau County, and regional business/industry in order to provide workplace literacy programs to adult workers with inadequate reading, math, communication, English language and decision-making skills. Training enabled workers to perform their jobs more productively, to become eligible for potential career advancement.

The following business partners participated:

- Alarm Device Manufacturing Company (ADEMCO),
- General Instrument Corporation,
- Marriott Corporation,
- MSC Industrial Supply Co./SID Tool Company, Inc.

The partnership:

- established a Workplace Consultant Committee;
- marketed the concept to Long Island businesses;
- developed job specific curriculum materials based on analyses of workplace skill and task requirements;
- recruited, assessed, and selected 250 adult workers for literacy classes held on site at the workplace;
- offered at least 50% release time at each site for classes; and
- provided instruction in job related academic basic skills, ESL, and business communications classes on site at each workplace.

The service delivery model was open-ended and individualized, which allowed for continuous enrollment, ongoing assessment, and ongoing placement. Instructors worked with each student and used individualized learning approaches. Curricula and work samples were industry specific. The instructional coordinator met with management, supervisors and employees to tailor instruction to the literacy needs of each worksite. Instructional staff maintained close communications with job supervisors and students for input leading to ongoing program improvement.

This eighteen-month partnership (6/1/93 through 11/31/94) provided basic skills instruction in English-as-a-Second-Language (ESL), and business communications to adult workers, using instructional materials tailored to the literacy requirements of their jobs. The partnership focused on program factors set forth in the National Workplace Literacy Program for 1993.

The overarching goal of the project, ***to increase workforce literacy and thereby improve workplace productivity***, follows the goal of the National Workplace Literacy Program. Specific project objectives for the LIWLP follow:

1. To establish a partnership between BOCES and industry that will provide training for adults with inadequate basic skills and to make business industry aware of these instructional needs.

2. To develop appropriate instructional materials for literacy training of adults with inadequate basic skills who are employed at the business partner sites.

3. To recruit 275 adult workers with limited basic academic, ESL, or communication skills.

4. To assess potential trainees in targeted industries, identify functional literacy levels, and select 240 participants who are likely to complete the training.

5. To provide training to upgrade or update basic skills for 90 adults in accordance with changes in workplace requirements.

6. To provide job-related ESL training (speaking, understanding, reading, and writing) to 90 adults.

7. To provide training to 70 adults to improve their communication and decision making skills and to improve their specific business communication skills.

8. To provide staff development for all instructors assigned to workplace sites.

The following figure depicts these objectives, coupled with project activities and outcomes.

FIGURE 1: PROJECT OBJECTIVES, ACTIVITIES, AND OUTCOMES

OBJECTIVES	ACTIVITIES	OUTCOMES
1. To establish a partnership between BOCES and industry that will provide training for adults with inadequate basic skills and to make business/industry aware of the instructional needs.	· Establish a Workplace Consultant Board comprised of representatives from: business, employees, and BOCES. · Make joint presentations to business/industry and unions in Nassau County about the Workplace Literacy Partnership. · Manager/Supervisor training in WPL. · Building curriculum w/industry. · Focus groups. · Meet w/WP Advisory Board periodically throughout grant timeline.	· Workplace Board members met to exchange ideas regarding the needs of workers with inadequate basic skills. · Increased awareness of the Workplace Literacy Partnership Long Island (LIWLP) business industry. · Workers/Managers/management provide clear goals for expected outcomes. · Open communication between all phases of project development. · Productivity improved on all levels.
2. To develop appropriate instructional materials for literacy training of adults with inadequate basic skills who are employed at the business partner sites.	· Target the literacy needs of current employees. · Tour workplaces and assess job performance tasks and literacy requirements of each. · Assess training materials used by businesses. · Develop instructional materials to meet training objectives. · Weekly meetings with managers and supervisors.	· Employers and employees developed statements of literacy skills existing and needed. · Job and task analyses were conducted for skills required. · Current training materials were evaluated for appropriateness. · Industry-specific instructional materials and curriculum were developed. · Checklist of accomplishments used as report card to company.
3. To recruit, 275 adult workers with limited basic academic, ESL or communication skills.	· Development of in-house marketing plans at business sites. · Dissemination of information to employees about benefits of completing instructional program. · Job supervisors recommend students. · Voluntary recruitment through flyers. · Flyers in paychecks. · Union partners (where applicable) meeting with workers.	· Strengthened working relationship with training and personnel managers. · Approximately 250 employees with limited basic skills selected.
4. To assess potential trainees in targeted industries to identify eligibility and functional literacy levels, and to select 250 participants who are likely to complete the training.	· Conduct oral and written testing for basic skills, literacy levels, aptitudes and other concerns. · Conduct interviews to assess career plans, support needs, and reasons for participation in training. · Provide on-site intensive industry-specific programs for employees of business partners.	· Completed individual assessment profile for 250 applicants. · Individualized learning prescriptions for 250 applicants. · 250 trainees selected from participating businesses for training in on-site training sessions.
5. To provide training to upgrade or update basic skills for 90 adults in accordance with changes in workplace requirements.	· Provide six on-site basic skills programs to approximately 90 employees using materials related to trainees' jobs. · Provide training on how to perform job(s) using job specific materials.	· Trainees increased their basic math or reading skills measured by Reading/Math tests and/or by performance based instruments. · Trainees gained competency in literacy skills needed to perform on the job tasks. · Workers became more productive in performing specific skills.
6. To provide job-related ESL training (speaking, understanding, reading, and writing) to 90 adults.	· Provide six on-site ESL instruction programs. · Provide job specific ESL training using materials related to trainees jobs. · Provide training in how to do jobs, using job specific materials.	· Trainees increased their English language skills (listening, speaking, reading, writing) needed on the job. · Trainees better understand tasks required to do their jobs. · Trainees enter basic skills programs in the future better prepared.
7. To provide training to 70 adults to improve their communication and decision making skills and to improve their specific business communication skills.	· Provide on-site training to improve workers' specific business communication skills and decision making skills.	· Employees increased eligibility for advancement by evidencing ability to complete performance based instruments (e.g., completion of reports and memorandums).
8. To provide staff development for all instructors assigned to workplace sites.	· Provide staff development for teachers regarding the needs of the workplace and the methodologies appropriate for use in workplace literacy education	· Teachers demonstrated understanding of workplace and instructional appropriate methods for use in workplace literacy programs.

BEST COPY AVAILABLE

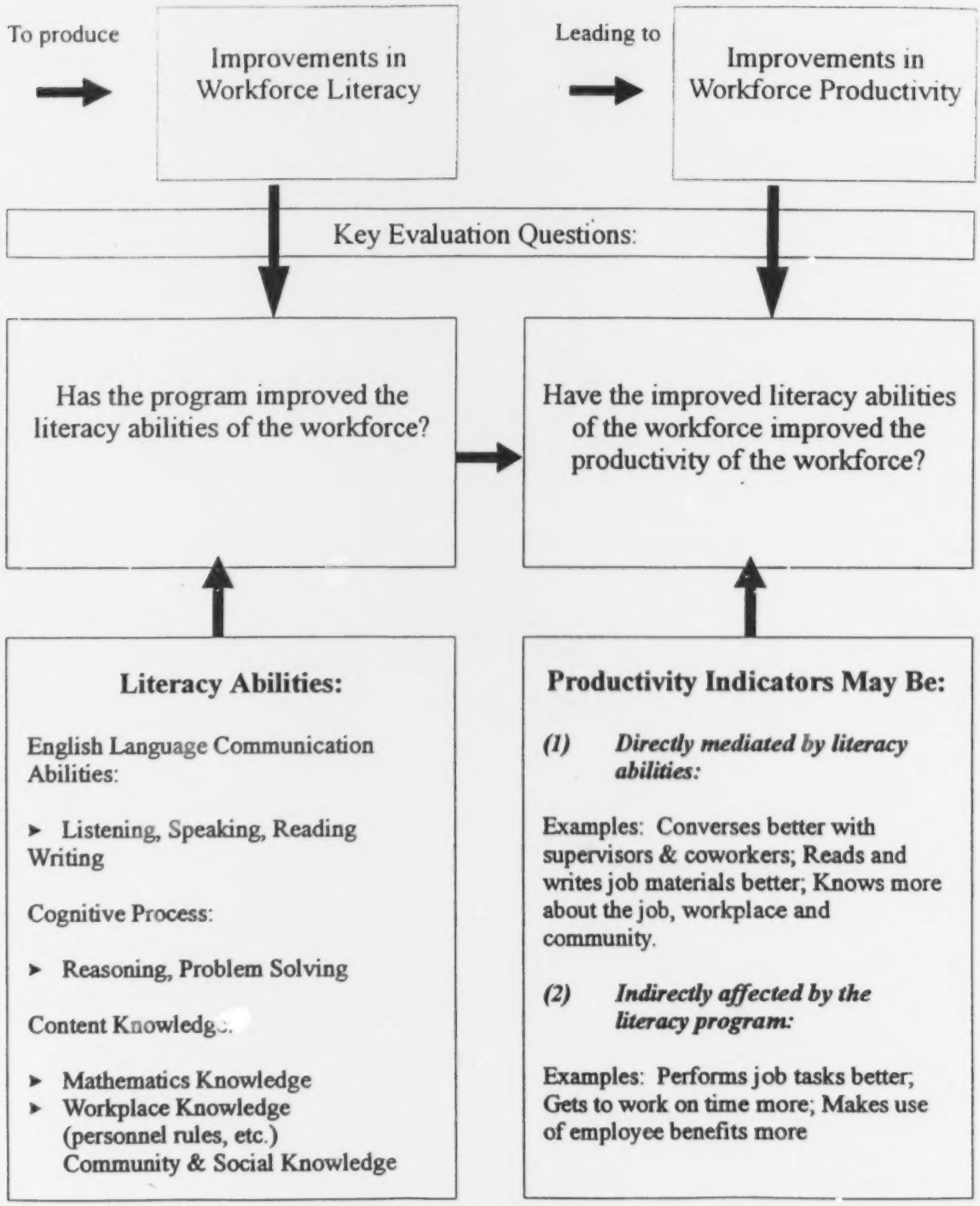
II. PURPOSE AND SCOPE OF THE EVALUATION

Reporting requirements for the Long Island Workplace Literacy Project are twofold: 1) an Evaluator Report prepared by an independent, external evaluation on project findings for the grant period, and 2) Project Performance and Fiscal Reports, prepared by project staff on project activities, accomplishments and expenditures. The project evaluation was designed to include formative and summative components that a) systematically provided feedback into all project processes to improve project operations and b) resulted in a comprehensive summative assessment and evaluation of all project processes and outcomes.

The purpose of the Long Island Workplace Literacy Project is to improve the productivity of the workforce in four business partner sites through the improvement of literacy skills in each workplace. Key evaluation questions are 1) have workforce literacy skills been improved and 2) has that led to improvements in productivity?

The overarching outcomes to be measured in the evaluation are the extent to which literacy abilities (as depicted in Figure 2) have been improved and what, if any, improvements in job performance result from participation in this workplace literacy program.

FIGURE 2: KEY EVALUATION QUESTIONS FOR THE LIWLP


To produce
Improvements in Workforce Literacy
Leading to
Improvements in Workforce Productivity
Key Evaluation Questions:
Has the program improved the literacy abilities of the workforce?
Have the improved literacy abilities of the workforce improved the productivity of the workforce?
Literacy Abilities:
English Language Communication Abilities:
► Listening, Speaking, Reading Writing
Cognitive Process:
► Reasoning, Problem Solving
Content Knowledge:
► Mathematics Knowledge
► Workplace Knowledge (personnel rules, etc.)
Community & Social Knowledge
Productivity Indicators May Be:
(1) Directly mediated by literacy abilities:
Examples: Converses better with supervisors & coworkers; Reads and writes job materials better; Knows more about the job, workplace and community.
(2) Indirectly affected by the literacy program:
Examples: Performs job tasks better; Gets to work on time more; Makes use of employee benefits more

** Adapted from the National Workforce Literacy Program*

The evaluation addresses the goal of the National Workplace Literacy Program, ***to improve the productivity of the workforce through the improvement of the worker's literacy abilities*** and for this reason, has employed assessment materials that are direct simulations of tasks involving the use of literacy abilities on the job. In addition, standardized testing instruments (BEST Test), job related reading task tests and informal assessment instruments were used in data collection, as described in Figure 3.

FIGURE 3: WORKPLACE LITERACY EVALUATION: TYPE OF DATA COLLECTED

Participant Evaluation

- Standardized tests (pre/post BEST Test)
- Attendance/contact hours
- Job Performance Assessment
- Portfolio Assessment
- Student Reaction Form
- Student Anecdotal Information and Interviews
- Teacher Evaluation ("Report Card")
- Focus Group Interviews

Program Evaluation

- Meeting Grant Objectives
- Administration and Management
- Timeline
- Advisory Board
- Recruitment
- Curriculum
- Staff Development

III. PROGRAM IMPLEMENTATION

Instructional programs were individualized for each business partner, with management, supervisors, and employees targeting jobs and tasks that would be improved by literacy skills development. Literacy task analyses were conducted for targeted jobs and curricula was developed using actual job materials and simulations, to teach reading, writing, and computational skills and/or English language proficiency.

Each business partner developed and implemented an in-house marketing plan to recruit workers in targeted jobs. Using a combination of performance-based and standardized tests, assessments were conducted of applicants' literacy skills and competencies to identify workers in need of instruction. The program's open-ended enrollment policy facilitated ongoing recruitment and placement of workers in need of program services. Each business partner, through a company-wide needs assessment, identified specific workplace literacy needs which served as the basis for program design.

All partners participated in and supported all phases of program planning, implementation, and evaluation. The business partners provided space, maintenance, utilities, and security for classes. Release time permitted employees to attend at least 50% of classes during work hours. In one case, General Instrument workers were granted 100% release time to attend classes. As part of their commitment to workplace literacy, the business partners recruited workers, provided job materials, provided ongoing monitoring of program participants on the job, developed employee incentive programs, participated in program evaluation, and participated on the Workplace Consultant Board. The education partner, Nassau BOCES, provided project management and staff development and staffed the classes with experienced teachers.

Profiles of the Business Partners

General Instrument, Ademco and SID Tool Company are large manufacturing companies which employ large numbers of operators and employees in the production areas. In many cases, employment does not require English speaking or reading skills or even a high school diploma. However, lack of these literacy skills severely limits employees' opportunities for advancement.

Marriott Corporation, a service industry, has identified workplace literacy needs similar to those of the manufacturing businesses. Low skilled jobs attract employees with minimal academic and English speaking skills. Marriott staff must be able to speak and understand English, communicate appropriately, and continually perfect those skills for job advancement to take place. For all the business partners, investment in employee retention and advancement is deemed critical to avoid frequent retraining and assure high quality service delivery. Table 1 depicts the Business Partner Profiles.

TABLE 1: BUSINESS PARTNERS PROFILE

Type of Business	Ademco	General Instrument	MSC/SID Tools	Marriott Corporation
Manufacturing Service	Yes	Yes	Yes	Yes
Total number of employees at each Business Site	1,100	257	400	500
Projected course enrollment at each business site (number of students)				
Limited English	200	2	10	20
Basic Adult Literacy & Math	100	10	20	
Basic Communication & Problem Solving	40	20	70	
Total Personnel for Training	340*	32	100	20

*Over a multi-year effort.

Curriculum Development

Curriculum, based on the literacy skills required for the targeted jobs and work tasks, was designed and developed by teachers and the curriculum coordinator. A functional context approach integrated the tasks and materials actually used on the job into the instructional process, to draw on workers' prior knowledge and reinforce classroom learning with job performance.

Literacy task analyses were conducted for each targeted job or task observing competent workers' job performance to identify basic literacy, thinking, communication and/or English language skills used by competent workers performing specific job tasks. Observation of the workplace environment indicated literacy skills needed (e.g., safety signs) and generated job-related contracts, including training and instructional materials, job specific vocabulary lists, work samples, and forms used by workers (e.g., production reports or sick leave requests). Literacy Task Analysis for each job task observed formed the basis of the curriculum for each course. Curricula were designed to teach employees how to acquire strategies and processes for locating, accessing and applying information as required to competently perform job tasks.

Assessment

To ensure that workers most in need of the program were enrolled in classes, and to assure that each worker's instructional program was based on his/her individual needs, skill levels were assessed by a combination of performance based instruments and standardized tests. English-as-a-Second-Language learners were tested prior to placement and scores were keyed to placement levels (I, II, III, IV), using the BEST Test. Learners in need of basic literacy education were given locator tests in reading and mathematics to determine approximate skill levels, and achievement tests to determine approximate grade levels. In addition to assessing cognitive skills, attitudes towards work and work-related tasks, were assessed by the instructors. The instructors and the employers assessed attitudes towards work and work-related tasks using supervisors and management interviews, checklists, and focus groups. Applicants with greatest need were admitted to the program.

Assessments resulted in the development of individualized learning prescriptions (ILP's) which were designed jointly by the instructor and the student and reviewed by the business partner liaison to ensure that the educational objectives were directly related to job skills and the needs of the company.

Recruitment

Recruitment was a joint responsibility of the business partners and the education partner. Marketing strategies included the following:

- Distribution of easy-to-understand program announcements to all eligible workers through company newsletters, flyers, bulletin boards, and announcements in pay envelopes;
- Introductory meetings held by personnel or training staff to inform workers of the training opportunity;
- Identification of possible participants by supervisors, personnel and training staff, with one-to-one follow-up.

Staff Development

The instructional coordinator and instructors met weekly to address curriculum development, instruction, and program implementation issues. Informal training was provided regarding the needs, interests, abilities, and backgrounds of adult learners, and instructional materials and techniques were developed and/or demonstrated.

Instructors participated in nine (9) hours of staff development on the design of a contextualized curriculum. Staff development training sessions were conducted in months two, three, ten and eleven.

Staff development sessions included these components:

1. Workplace settings: company protocol, classrooms, procedures.
2. Contextualized curriculum: development, materials, instructional methods and strategies.
3. Learning styles: how to identify, how to accommodate, individual and group styles.
4. Multicultural awareness; values clarification.
5. Motivation: keeping level high, involving the company, ongoing strategies.
6. Record keeping and reporting.
7. ILP development and assessment.
8. Troubleshooting: problem areas, individual issues, barriers to success.

Instruction

The instructional model was, based on a model developed during a previous pilot workplace literacy program funded by the New York State Education Department, and was tailored to meet the needs of the business partners and their employees.

The program was self-paced on open enrollment/open exit upon completion of individual learning objectives. Instruction was conducted in listening, speaking, reading and writing, for limited-English-speaking learners; and in reading, mathematics, oral and written communication, decision making, and business communication for English-speaking students.

A variety of approaches and materials were utilized, including self-instruction and use of audio-visual and video technology. Instructors oriented learners to use diagnostic instruments, learning prescriptions, and other instructional materials and methods and maintained a record-keeping system to track learning accomplishments (accessible to job supervisors and learners). Close collaboration between instructors and job supervisors allowed supervisors to support participants and monitor the impact of classroom learning on workers' competency on the job.

Dissemination

Dissemination activities included presentations for local businesses and at local and state conferences and national meetings. Information was disseminated to professional groups, service providers, and agencies in Nassau County to promote interest in replication at additional business sites. Technical assistance and support was provided to other regional efforts, and information and materials were distributed for statewide and national dissemination.

Management and Administration

A Workplace Consultant Board was formed and provided advice and guidance on program design and implementation Membership included representatives from BOCES, business partners and employee participants.

Each business partner committed to the following:

- Provide facilities for all training classes.
- Develop an in-house marketing plan and recruit participants
- Provide a minimum of 50% release time for all training.
- Participate on the Workplace Consultant Board.
- Participate in Job Skills Needs Assessment.
- Provide job related materials for instructional development.
- Participate in the development of an employee incentive program (e.g., monthly achievement awards, letters of commendation, graduation ceremony).
- Participate in planning and implementing the program evaluation, including focus groups, managers surveys, and joint student/supervisor interviews.

V. FINDINGS

Demographic Information

A total of 270 students enrolled in 18 classes at the four business partner worksites. The distribution of classes and actual enrollment is depicted in Table 2.

The greatest number of classes were offered at Ademco (N=11), followed by SID Tool where four classes were offered. ESL and Advanced ESL were offered most frequently (N=13 classes) across the project.

TABLE 2: STUDENT ENROLLMENT AND CLASS DISTRIBUTION

Business Site	Basic English	Basic Math	Communication/ Problem Solving	ESL	ESL Advanced	Total
All Sites	(N) Participants 9	(N) Participants 19	(N) Participants 34	(N) Participants 173	(N) Participants 35	(N) Participants 270
Ademco		1 class 13		5 classes 25 19 17 18 16	4 classes 6 12 3 14	182
General Instrument	1 class 9	1 class 6				15
Marriott				1 class 25		25
SID/MSC Tool			3 classes 14 12 8	1 class 14		48
TOTAL CLASSES	1	2	3	8	4	18
TOTAL PARTICI-PATION	9	19	34	173	35	270

Gender and Single Head of Household Status

Slightly more women (55.7%) than men (44.3%) were enrolled in classes at the four sites. Forty percent of the participants were single heads of households. Participation for each site is depicted in Table 3.

TABLE 3: GENDER AND SINGLE HEAD OF HOUSEHOLD STATUS BY WORKSITE

Business Partner Worksite	Female (%)	Male (%)	Total	Percent of Total Who Were Single Head of Household
All Sites	55.7%	44.3%	100%	40.4%
Ademco	53.6%	46.4%	100%	35.4%
General Instrument	68.7%	31.3%	100%	45.3%
Marriott	84.0%	16.0%	100%	24.0%
SID/MSC Tool	39.3%	60.7%	100%	55.7%

Age

The average age of students across all worksites was 39.9 years. This varied slightly by site as depicted in Table 4.

TABLE 4: MEAN AGE OF PARTICIPANTS ACROSS ALL SITES

Business Partner Worksite	Mean Age
All Sites	39.9 years
Ademco	42.0 years
General Instrument	38.9 years
Marriott	39.4 years
SID/MSC Tool	34.5 years

Ethnicity and LEP Status

Across all four worksites, one half of the participants were Hispanic (50.6%), 25.9% were White, 13.6% were Black and 9.9% were Asian. Seventy eight percent of the participants were limited English proficient (LEP) across all business partner worksites. This distribution varied at each worksite and was reflected in the classes offered at each site.

TABLE 5: ETHNIC DISTRIBUTION AND LEP STATUS OF PARTICIPANTS

Business Site	LEP Status	Asian	Black	Hispanic	White
All Sites	78%	9.9%	13.6%	50.6%	25.9%
Ademco	94%	14.5%	4.1%	76.9%	4.5%
General Instrument	67%	3.7%	14.6%	8.2%	73.5%
Marriott	96%	16.0%	12.0%	72%	0.0%
SID/MSC Tool	33%	0.0%	41.5%	7.1%	51.4%

Current Employment

As shown in Table 6, the greatest percentage of participants (40.3%) were employed between one and five years; 31% were employed between six and ten years. Less than ten percent (9.5%) of the participants were employed for 16 years or longer at any worksite.

TABLE 6: NUMBER OF YEARS WITH THE COMPANY ACROSS SITES AND BY SITE

Business Partner Worksite	0-5 Years	6-10 Years	11-15 Years	16+ Years
All Sites	43.3%	31.1%	15.4%	9.5%
Ademco	32.3%	31.4%	23.4%	13%
General Instrument	42.%	33.6%	14%	10.4%
Marriott	70%	26%	2%	2%
SID/MSC Tool	609%	35.1%	0%	4%

Occupational Distribution

Regarding the occupations represented in the LIWLP, the greatest number of participants were Assemblers (24.7%), followed by Housekeepers (6.9%), Solderers (4.7%), and Porters (4.4%). A total of 57 occupational titles were represented in workplace literacy classes in four worksites. This is depicted in Table 7. The distribution of occupations by worksite is depicted in Tables 8-11.

TABLE 7: OCCUPATIONS REPRESENTED BY STUDENTS ACROSS ALL WORKSITES

(N= 273)

Job Title	N	%	Job Title	N	%
Accounts Payable Clerk	6	2.1	Lead Operator	3	1.1
Administrative Clerk	1	0.4	Machine Operators	1	0.4
Alarm Systems	1	0.4	Machinist	1	0.4
Application Engineer	1	0.4	Maintenance	2	0.7
Assemblers	68	24.7	Market Admin.	1	0.4
Assistant Buyer	1	0.4	Mechanic	8	2.9
Bar Coder	1	0.4	Order Picker	1	0.4
Box Maker	1	0.4	Packers	8	2.9
Checker	3	1.1	Painter	3	1.1
Claims Coordinator	1	0.4	Porter	12	4.4
Clerical Draftsman	1	0.4	Product Admin.	2	0.7
Clerk	2	0.7	Production Manager	1	0.4
Collections Clerk	7	2.6	Quality Control	2	0.7
Computer Programmer	3	1.1	Repairpersons	4	1.5
Cook	1	0.4	Sales Rep.	7	2.6
Credit Clerk	1	0.4	Service Rep.	2	0.7
Credit Representative	9	3.3	Shipping Clerk	1	0.4
Customer Service Rep	5	1.8	Solderers	13	4.7
Data Entry Clerk	1	0.4	Sorter	1	0.4
Dishwasher	1	0.4	Special Order Clrk	1	0.4
Dispatcher	1	0.4	Stock Handler	2	0.7
Electronic Technician	3	1.1	Supervisor	2	0.7
Housekeeper	19	6.9	Switchboard Oprtr.	3	1.1
Human Resources	2	0.7	Technician	2	0.7
Import Administration	2	0.7	Testers	5	1.8
Inspector	10	3.6	Waiter	1	0.4
Laundry Worker	1	0.4	Warehouseman	1	0.4
Lead Associate	4	1.5	Wirer	1	0.4
Lead Expeditor	1	0.4	No Response	25	9.1
TOTAL				273	100%

TABLE 8: DISTRIBUTION OF OCCUPATIONS: ADEMCO
(N=123)

Job Title	N
Alarm Systems	1
Assembler	37
Clerical Draftsman	1
Clerk	3
Customer Relations	1
Electronic Tech	3
Fire Alarms	1
Inspection	6
Lead Man	1
Lead Operator	1
Machine Operator	1
Maintenance	1
Mechanic	8
Operator	1
Packers	2
Painter	3
Porter	12
Production	7
Quality Control	2
Repairperson	2
Solderers	2
Supervisor	1
Technician	6
Tester	5
Warehouseman	1
Wirer	1
No Response	13
TOTAL	123

TABLE 9: DISTRIBUTION OF OCCUPATIONS: GENERAL INSTRUMENTS
(N=51)

Job Title	N
Accounts Payable Clerk	6
Admin. Clerk	1
Assistant Buyer	1
Claims Coordinator	1
Collections	1
Computer Progammer	3
Credit Representative	3
Customer Service	9
Data Entry Clerk	2
Human Resources	1
Import Administration	2
Lead Expeditor	2
Machinist	1
Market Admin.	1
Producuction Manager	1
Quality Control	2
Sales Rep.	5
Service rep.	2
Sorter	1
Switchboard Operator	3
Technician	2
No Response	1
TOTAL	51

TABLE 10: DISTRIBUTION OF OCCUPATIONS: MARRIOTT
(N=25)

Job Titles	N
Cook	1
Dishwasher	1
Housekeeper	19
Laundry Worker	1
Maintenance	1
Waiter	1
No Response	1
TOTAL	25

TABLE 11: DISTRIBUTION OF OCCUPATIONS: SID/MSC TOOL
(N=34)

Job Title	N
Bar Coder	1
Box MakerPacker	1
Checker	3
Clerk	1
Collections Clerk	4
Credit CLerk	1
Customer Service Rep.	2
Dispatcher	1
Lead Associate	4
Order Picker	1
Packer	6
Product Admin.	2
Sales	1
Sales Support	1
Shipping Clerk	1
Special Order Rep.	1
Stock Handler	2
Supervisor	1
TOTAL	34

IMPACT ON STUDENTS

Duration and Frequency of Classes

While hours of instruction varied by worksite and class, on average classes were scheduled to meet at least twice a week. Table 12 presents summary contact hour information for all classes at the four worksites. According to these data, the greatest percentage (36%) of students across all sites attended between 26 and 50 hours of instruction. Detailed information follows in Table 13 where information is presented for each site and each class.

TABLE 12: TOTAL CONTACT HOURS OF INSTRUCTION ACROSS ALL WORKSITES

Total # of Class Hours Attended by Participants	% All Sites	Ademco	General Instrument	Marriott	SID/MSC Tool
1-25	31.2%	23.2%	47.8%	32.0%	38.1%
26-50	36.0%	43.0%	45.0%	16.0%	12.8%
51-75	12.9%	5.9%	2.7%	20.0%	41.7%
76-100	7.3%	9.8%	0.0%	16.0%	4.2%
101-125	5.1%	7.2%	0.0%	16.0%	0.0%
126-150	5.7%	8.7%	4.5%	0.0%	0.0%

Classes were designed to meet the needs of each business partner and their employees, and were scheduled to coordinate with work shifts and production/service demands. The next table presents information about classes at each business partner worksite, their duration, frequency and range of attendance.

TABLE 13: DURATION, FREQUENCY, AND CONTACT HOURS BY CLASS BY WORKSITE

Business Partner Site: ADEMCO
(N = 182)

Name of Class	# of Participants Enrolled	Class Duration	Total # of Hours: Instruction Per Week	Total # Release Hours by Company	Total Possible Contact Hours	Range of Attendance (Hours)	% Attending
ESL (1)	17	12/93-11/94	4	2	148	1-25 26-50 51-75 76-100 101-125 126-150	17.6% 11.8% 0.0% 11.8% 52.9% 5.9%
ESL (2)	19	11/93-06/94	4	2	97	1-25 26-50 51-75 76-100 101-125 126-150	10.5% 15.8% 5.3% 68.4% 0.0% 0.0%
ESL (3)	25	7/94-11/94	4	2	168	1-25 26-50 51-75 76-100 101-125 126-150	4.0% 4.0% 0.0% 8.0% 12.0% 72.0%
ESL (4)	18	7/94-11/94	4	2	52	1-25 26-50 51-75 76-100 101-125 126-150	5.6% 77.8% 11.1% 0.0% 0.0% 0.0%
ESL (5)	16	12/93-06/94	4	2	88	1-25 26-50 51-75 76-100 101-125 126-150	25.0% 31.3% 43.8% 0.0% 0.0% 0.0%

Name of Class	# of Participants Enrolled	Class Duration	Total # of Hours: Instruction Per Week	Total # Release Hours by Company	Total Possible Contact Hours	Range of Attendance (Hours)	% Attending
ESL Advanced (1)	12	12/93-11/94	2	2	62	1-25 26-50 51-75 76-100 101-125 126-150	75.0% 16.7% 0.0% 0.0% 0.0% 0.0%
ESL Advanced (2)	6	12/93-11/94	2	2	104	1-25 26-50 51-75 76-100 101-125 126-150	16.7% 83.3% 0.0% 0.0% 0.0% 0.0%
ESL Advanced (3)	3	12/93-11/94	2	2	52	1-25 26-50 51-75 76-100 101-125 126-150	33.3% 66.7% 0.0% 0.0% 0.0% 0.0%
ESL Advanced (4)	14	7/94-11/94	4	2	52	1-25 26-50 51-75 76-100 101-125 126-150	0.0% 80.0% 13.3% 0.0% 0.0% 0.0%
ESL Eve.	39	12/93-11/94	8	4	180	1-25 26-50 51-75 76-100 101-125 126-150	0.0% 17.9% 33.3% 10.3% 7.7% 30.8%
Basic Math	13	11/93-7/94	2	2	41	1-25 26-50 51-75 76-100 101-125 126-150	46.2% 30.8% 23.1% 0.0% 0.0% 0.0%

Business Partner Site: GENERAL INSTRUMENT (N = 15)							
Name of Class	# of Participants Enrolled	Class Duration	Total # of Hours of Instruction Per Week	Total # of Release Hours by Company	Total Possible Contact Hours	Range of Attendance (Hours)	% Attending
Basic English	9	11/93-2/94	4	4	50	1-25 26-50 51-75 76-100 101-125 126-150	44.4% 55.6% 0.0% 0.0% 0.0% 0.0%
Basic Math Skills (1)	6	11/93-2/94	4	4	50	1-25 26-50 51-75 76-100 101-125 126-150	66/7% 33.3% 0.0% 0.0% 0.0% 0.0%

Business Partner Site: MARRIOTT HOTEL (N = 25)							
Name of Class	# of Participants Enrolled	Class Duration	Total # of Hours of Instruction Per Week	Total # of Release Hours by Company	Total Possible Contact Hours	Range of Attendance (Hours)	% Attending
ESL	25	11/93-11/94	4	2	150	1-25 26-50 51-75 76-100 101-125 126-150	32.0% 16.0% 20.0% 16.0% 16.0% 0.0%

Business Partner Site: SID/MSC TOOL (N = 48)							
Name of Class	# of Participants Enrolled	Class Duration	Total # of Hours of Instruction Per Week	Total # of Release Hours by Company	Total Possible Contact Hours	Range of Attendance (Hours)	% Attending
Communication/ Problem Solving	8	11/93-11/94	4	2	96	1-25 26-50 51-75 76-100 101-125 126-150	0.0% 12.5% 75.0% 12.5% 0.0% 0.0%
Communication/ Problem Solving	14	11/93-11/94	4	4	70	1-25 26-50 51-75 76-100 101-125 126-150	32.4% 45.9% 8.1% 0.0% 0.0% 13.5%
Communication/ Problem Solving	12	7/94-11/94	1	1	14	1-25 26-50 51-75 76-100 101-125 126-150	100.0% 0.0% 0.0% 0.0% 0.0% 0.0%
ESL	14	12/93-09/94	4	2	104	1-25 26-50 51-75 76-100 101-125 126-150	14.3% 35.7% 50.0% 0.0% 0.0% 0.0%

Student Outcomes and Instructional Gains

For all classes, the focus was on the measurement of improvement in instruction as it pertained to the workplace and the requirements of the individual's job, as identified in the job and literacy task analyses.

Student outcomes were measured using a combination of assessment instruments, based upon the requirements of the course and the current state-of-the-art in adult education and workplace literacy. Therefore, with the exception of ESL classes, standardized testing was waived in favor of portfolio assessment, teacher and supervisor ratings and various informal assessment measures. Data for ESL classes included these measures, coupled with the BEST Test data. These are presented in Table 14. Further assessment data, based upon supervisor ratings on productivity, job improvement and other job performance indicators, are presented in The Employers' Perspective.

TABLE 14: STUDENT OUTCOMES BY WORKSITE AND CLASS

Business Partner Worksite	% Tested Higher	% Improved Communication Skills	Mean/ESL Gain by Number of Levels (BEST Test)	Portfolio Parameter	Mean Rating
All Sites\ All Classes	74.3%	77.3%	1.7	Verbals Nonverbal Listening Reading Writing	2.8 2.8 3.2 2.8 2.6
ADEMCO Classes (N=11)					
ESL (1)	1	1	0.021	Verbals Nonverbal Listening Reading Writing	2.4 2.2 2.5 2.3 2.2
ESL (2)	7.7%	0.0%	2.1%	Verbals Nonverbal Listening Reading Writing	N/A N/A N/A N/A N/A
ESL (3)	73.7%	73.7%	1.8%	Verbals Nonverbal Listening Reading Writing	1.4 2.0 1.9 1.4 1.7
ESL (4)	100%	100%	0.8%	Verbals Nonverbal Listening Reading Writing	2.3 2.5 2.6 2.0 1.8
ESL (5)	100%	100%	4.6%	Verbals Nonverbal Listening Reading Writing	1.5 2.9 2.8 1.9 1.4

BEST COPY AVAILABLE

Business Partner Worksite	% Tested Higher	% Improved Communication Skills	Mean/ESL Gain by Number of Levels (BEST Test)	Portfolio Parameter	Mean Rating
ESL Advanced (1)	100%	100%	N/A	Verbals Nonverbal Listening Reading Writing	2.6 3.0 4.1 3.8 3.1
ESL Advanced (2)	100%	100%	1.3	Verbals Nonverbal Listening Reading Writing	2.8 2.7 3.2 2.5 2.5
ESL Advanced (3)	100%	100%	0.8	Verbals Nonverbal Listening Reading Writing	5.0 4.0 5.0 4.3 4.0
ESL Advanced (4)	100%	100%	1.4	Verbals Nonverbal Listening Reading Writing	3.0 2.9 2.9 2.8 2.4
ESL Evening	100 %	100%	1.6	Verbals Nonverbal Listening Reading Writing	2.3 2.5 2.2 2.3 2.1
Basic Math Skills	100%	100%	N/A	Verbals Nonverbal Listening Reading Writing	3.5 3.8 3.8 3.5 3.0

GENERAL INSTRUMENT Classes (N=3)					
Basic English	100%	100%	11.5%	Verbals Nonverbal Listening Reading Writing	3.0 N/A 4.0 3.0 4.0
Basic Math Skills (1)	50%	0%	N/A	Verbals Nonverbal Listening Reading Writing	N/A N/A N/A N/A N/A
MARRIOTT Classes (N=1)					
ESL	24%	N/A	80%	Verbal Nonverbal Listening Reading Writing	2.6 2.5 2.6 2.7 2.6
SID/MSC TOOL Classes (N=3)					
Communication/ Problem Solving (1)	100%	100%	N/A	Verbals Nonverbal Listening Reading Writing	3.6 3.0 3.4 3.5 3.0
Communication/ Problem Solving (2)	100%	100%	N/A	Verbals Nonverbal Listening Reading Writing	4.1 3.6 4.1 4.0 3.5
Communication/ Problem Solving (3)	100%	100%	0.4	Verbals Nonverbal Listening Reading Writing	4.1 3.6 4.1 4.0 3.5

Student Reaction to the Classes

When students were interviewed regarding the workplace literacy program and their classes, they were very enthusiastic and positive about their experiences.

Regarding their reasons for attending, students identified the following priorities:

- To improve my job performance;
- To further my education;
- To qualify for future positions;
- To better meet my personal goals; and
- To comply with my supervisors recommendation.

Regarding the impact of their class on daily job tasks, students identified the following performance improvements, in order of priority, as a result of instruction:

- Speak and write better English;
- Use verbs better in conversation;
- Prepare reports with improved vocabulary usage;
- Communicate and understand supervisors requests and orders;
- Use better research and decision making skills; and
- Able to be promoted as a result of improved job performance.

When asked what they would change to improve the workplace literacy program, students offered these suggestions:

- Focus more on comprehension and communication issues
- Increase the length of classes
- Differentiate class enrollment by knowledge and skill levels, and
- Eliminate open entry/exit policies and set stricter limits on length of time required to attend class.

THE TEACHERS' PERSPECTIVE

Project teachers represented the critical link between the worksite and the employee. Teachers were asked to rate their class participants and business partners, and the transfer of training to the worksites. These data are presented for students and for business partners, in Tables 15 and 16.

In the following table, teachers rated their classes, regarding the extent to which training participants were actively engaged in linking what was taught in class back to the workplace.

TABLE 15: TEACHERS' RATINGS OF PARTICIPANTS' ABILITY TO LINK TRAINING TO WORKSITE

Rating Scale\ Parameter	Excellent (5)	Very Good (4)	Good (3)	Fair (2)	Poor (1)	N/R	Mean Rating
Trainees participate actively in training.	4	1	1	1	0	0	4.5
During training, trainees form peer relationships to support implementation of learning at work.	3	1	2	0	0	1	4.4
Trainees participate in planning of training.	3	1	0	1	1	0	3.7
Trainees anticipate barriers to implementing changes on the job.	1	1	3	0	0	1	3.6
Trainees develop plans to overcome barriers to implementing changes.	1	0	3	0	0	1	3.2
Trainees are responsible for maintaining an "application notebook" of ideas they will use back on the job.	1	0	3	1	1	0	2.9
Trainees develop action plans for application of learning.	0	1	1	0	0	1	2.6

- Mean ratings for trainees were highest on participation in training (4.5), the development of peer relationships to support implementation of learning at the worksite (4.1), and participation in planning of training (3.8). Mean ratings for trainees were lowest in development of action plans to apply learning at the worksite (2.6).

In Table 16, teachers rated the business partners regarding the extent to which the companies planned strategies to ensure that learning was transferred to the worksite.

TABLE 16: TEACHERS' RATINGS OF BUSINESS PARTNER STRATEGIES: LINKING TRAINING BACK TO THE WORKSITE

Rating Scale\ Parameter	Excellent (5)	Very Good (4)	Good (3)	Fair (2)	Poor (1)	N/R	Mean Rating
Training simulates the work setting. Trainees use actual materials from job and practice application in contexts that mimic real work contexts.	4	2	0	0	0	0	4.7
Managers/supervisors participate in orientation sessions	1	4	0	1	0	0	3.8
Managers/supervisors arrange for co-workers to attend training	1	4	1	1	0	0	3.7
Training is designed with a peer coaching component so that participants have a system of support for implementing new behavior.	3	0	2	0	1	0	3.6
Managers/supervisors share accountability	1	2	4	0	0	0	3.6
Supervisors/managers demonstrate support for transfer by participating, conducting, and using skills in training taught.	1	2	2	1	0	0	3.5
Managers/supervisors are skilled coaches that actively support training.	0	2	3	0	0	1	3.4
Trainers devote training time for participants to develop application plans and overcome barriers to transfer of learning.	1	0	4	0	0	1	3.4

- Mean ratings for the business partners were generally high. They were highest regarding the extent to which training simulates the workplace and real work contexts (4.7); the cooperation of management for workers to attend training (4.0); the participation of management in orientation sessions; and shared accountability for training by managers and supervisors.
- When queried in focus groups regarding the strengths of the program and areas for improvement, teachers were enthusiastic and suggested valuable recommendations based on their experiences. Overwhelmingly, the teachers expressed strong support for the LIWLP, the business partners, program staff and participants. They reported that excellent instructional support was available throughout their tenure.

Their observations are synthesized here:

- There was excellent instructional support and training available and the weekly meetings provided an important way to reduce the separation between colleagues. The support available to prepare literacy task analyses, and lesson plans was essential and of great benefit.

- Companies continue to require information and awareness on the instructional process, including the need to grasp the "basics" before proceeding to indepth contextual instruction.

- Transient teaching staff for time-limited assignments will continue to be a concern. This further limits the ability to transfer knowledge/information between teachers and create instructional continuity at the worksites.

- A more focused, structured curriculum or syllabus would be of benefit, coupled with a Teachers Manual, perhaps one which is commercially available and flexible enough to modify for local needs.

- Student promotion and recognition by business partner warrants consideration, as an additional incentive for students.

- Instruction in modules, rather than long-term classes, would create a more flexible atmosphere for scheduling by employees and business partners.

- The classes were positive and favorable experiences, where students learned "they could accomplish". There is a need for an ongoing loop to keep supervisors aware of realistic expectations regarding student development and advancement.

THE EMPLOYERS' PERSPECTIVE

Two key evaluation questions framed this study of the LIWLP. The first, whether the program improved the literacy abilities of the workforce, was addressed in Impact on Students. Data demonstrates strong and positive growth in several domains, using a variety of indicators and measures. The second question, whether the improved literacy abilities of the workforce, improved the productivity of the workforce, is difficult to answer with precision at this early date and warrants follow-up studies. However, certain baseline data can be established at this time. Supervisors were queried regarding ten critical indicators that provide evidence for improved job performance and productivity, resulting from the LIWLP, as depicted in Table 18.

TABLE 18: SUPERVISOR RATINGS OF JOB TASK PERFORMANCE AS A RESULT OF PARTICIPATION IN LIWLP (N=96)

Rating Scale\Parameter	Excellent (5)	Very Good (4)	Good (3)	Fair (2)	Poor (1)	N/R	Mean Rating
Increased Productivity	16	29	24	17	9	1	4.3
Improved Job Performance	17	33	20	17	7	2	3.4
Improved Attendance	22	12	9	12	11	30	3.3
Improved Job Attitude and Moral	14	31	27	10	11	3	3.3
Improved Understanding of Safety Rules and Procedures	11	26	38	11	9	1	3.2
Improved Communication Interpersonal Skills on All Levels	13	29	25	15	13	1	3.2
Enhanced Ability of Employees to Meet Changes in Work Environments	15	25	24	20	11	1	3.1
Less Confusion Regarding Work Assignments	12	26	31	10	16	1	3.1
Improved Understanding and Performance in Team Work Resolution	13	23	30	16	13	1	3.1
Improved Ability to Complete Forms and Personal Data Sheets	12	10	36	10	24	4	2.7

Supervisors were very positive in rating workers' job performance as a result of participation in the Workplace Literacy Program. Highest rated were increased productivity (4.3), improved job performance, improved attendance (3.3), improved job attitude and morale (3.3), and improved understanding of safety rules and procedures (3.2). Rated lowest was improved ability to complete forms and personal data sheets (2.7).

Observations of Management, Supervisors and Other Business Partner Stakeholders

Interviews and focus groups were conducted at several points, specifically to query the Business Partners regarding program implementation, impact on workers and worksite, and strengths and areas that warranted improvement or consideration.

At each company a lead "point person" was responsible for assuring that the LIWLP was implemented according to plan as well as according to the culture of each company. Their observations and suggestions are synthesized in the next section.

There is a need for supervisors to understand what contextual learning means. This may require bringing supervisors into the class setting for reinforcement from class to worksite and vice versa.

When a company is able to project for downtime, this may provide the opportunity, and extra time necessary, for "intensive instruction" which cannot be realized in the normal workweek.

Instruction by module, with specific module objectives, may be more appropriate for some worksite settings and scheduling needs.

Some supervisors and managers see themselves as a potential barrier and would like to see a stronger link between themselves and the instructional program. This might involve additional training and preparation, to create an improved structure at the worksite.

There will always be a critical need for expert, highly trained and competent teachers with skills that go beyond the traditional classroom. Teachers must answer to students and supervisors and need to have a keen understanding of the "big picture" to keep the instructional process in cycle - Progress Reports and ongoing communication are essential.

V. CONCLUSION AND RECOMMENDATIONS

This evaluation was designed to include formative and summative components that systematically provided feedback into all project processes to improve project operations, resulting in a comprehensive summative assessment and evaluation of all project processes and components. Because the purpose of the LIWLP was to improve the productivity of the workforce, through improvement of literacy skills, the evaluation was guided by these evaluation questions:

1. Have workforce literacy skills been improved?
2. Has that led to improved productivity?

To answer these questions, multiple types of data were collected and analyzed.

- Demographic data
- Literacy ability indicators (listening, speaking, reading, writing)
- Cognitive process
- Content knowledge
- Mathematical knowledge
- Workplace knowledge
- Productivity indicators

The evaluation addresses the goal of the National Workplace Literacy Program, ***to improve the productivity of the workforce through the improvement of the worker's literacy abilities*** and for this reason, has employed assessment materials that are direct simulations of tasks involving the use of literacy abilities on the job. In addition, standardized testing instruments (BEST Test), job related reading task tests and informal assessment instruments were used in data collection.

The Long Island Workplace Literacy Project successfully completed an 18 month project period, under funding provided by the National Workplace Literacy Program. Instruction was offered at four business partners in basic skills, English as a Second Language, and business communication, using instructional materials tailored to the literacy requirements.

The project was characterized by the following elements which are essential for a successful workplace literacy program:

- **There was active involvement by the business partners and unions in planning, designing, and operating the project**

  Business and labor union partners were supportive of and actively involved in the workplace literacy project. Project partners provided space for classrooms, monitor program services, and provide financial support for program services. This type of involvement is supported by the research literature. Involvement by businesses consisted of two types: upper management and front-line supervisors.

- **There was active and ongoing involvement by employees in conducting literacy task analyses and determining worker literacy levels**

  Employees were involved with the workplace literacy project in a variety of ways. These include planning the project, conducting literacy task analyses, determining the literacy needs of workers, and participating on advisory panels. The active and ongoing involvement by employees, who are potential participants, is an important component associated with project success.

- **There was systematic analysis of on-the-job literacy requirements**

  Systematic analyses of on-the-job literacy requirements, known as literacy task analyses, include analyzing specific job responsibilities, the skills required to accomplish the job, and written job materials. Formal literacy task analyses were conducted and information from these analyses was used to inform the design and content of instructional services. The design of instructional materials, and the measures for assessing improved participant literacy levels. Literacy task analyses are costly and time consuming to conduct but bear out rich and important information for program development. This type of activity is supported by the research literature, which indicates that analyzing the literacy requirements of jobs is an essential component of workplace literacy projects.

- **Development of instructional materials related to literacy skills required on the job**

  The instructional materials were related to job literacy requirements. Such materials included corporate manuals and instructions for operating machinery and other equipment.

The research literature emphasizes the importance of using instructional materials that are related to literacy skills required on the job. These literacy skills may be specifically related to individual jobs, or to almost any skill that is required to successfully perform the job.

For all Business Partner sites, there were gains in literacy abilities as measured by formal and informal assessment strategies across nearly all classes. A more complex measure of success, the Supervisor Rating of Job Task Performance, was administered on a trial basis to gather baseline data to begin to assess the impact of this program on worker productivity. These data were overwhelmingly positive and strongly suggest that the program has not only improved literacy abilities but that these improved literacy abilities have a direct bearing on worker productivity, as observed by front line supervisors. These data need to be followed in subsequent program implementation at the sites. Transfer of training was highly rated by teachers regarding students and business partners on key indicators of the program's ability to link back to the worksite. These data also warrant followup and reevaluation in the future.

When students were interviewed regarding the workplace literacy program and their classes, they were very enthusiastic and positive about their experiences.

Regarding their reasons for attending, students identified the following priorities: to improve their job performance; to further their education; to qualify for future positions; to better meet personal goals; and to comply with supervisors' recommendations.

Regarding the impact of class on their daily job tasks, students identified the following performance improvements, in order of priority, as a result of instruction:

- Speak and write better English;
- Use verbs better in conversation;
- Prepare reports with improved vocabulary usage;
- Communicate and understand supervisors requests and orders;
- Use better research and decision making skills; and
- Eligible for promotion as a result of improved job performance.

When asked what they would change to improve the workplace literacy program, students offered these suggestions:

- Focus more on comprehension and communication issues;
- Increase the length of classes;
- Differentiate class enrollment by knowledge and skill levels; and
- Eliminate open entry/exit policies and set stricter limits on duration of class.